In re Appln. of Arora et al.
Serial No. 09/641,556


**PATENT**
Attorney Docket No. 212634

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Arora et al.

Art Unit: 2121

Application No. 09/641,556

Examiner: Thomas K. Pham

Filed: August 17, 2000

For: PATTERN- AND MODEL-BASED POWER LINE MONITORING



**AMENDMENTS TO SPECIFICATION AND CLAIMS MADE VIA AMENDMENT A**

*Amendments to Specification:*

On page 16, please amend the paragraph starting in line 9 as follows:

FIG. 5 is a diagram 500 showing how one embodiment addresses an object 502 in two different ways. The object 502 can be one of the device objects 326 of FIG. 4, or one of the computation objects 406 of FIG. 4. The object 502 has one or more synchronous addresses [304] 504, and one or more asynchronous addresses [306] 506. The synchronous addresses 504 can include an address in the form of a marshaled distributed-object interface pointer, or another type of reference that enables real-time communication with the object 502. The asynchronous addresses [306] 506 can be in the form of a queue name, a marshaled handle to a queue, or other address. The asynchronous addresses [306] 506 are used to asynchronously communicate with the object 502 when it is temporarily unavailable or too busy, or when synchronous communication is otherwise not desired.

On page 18, please amend the paragraph starting on line 3 as follows:

The device heartbeats 610 and the sensor heartbeats [610] 612 are received by the SSS 316 through the ABLS 322, while the object heartbeats 614 are received by the SSS 316 through



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the NBLS 320. The SSS 316 directly receives the daemon heartbeats 616. When an entity does not send a heartbeat as required by its refresh rate, the entity ultimately times out and is removed from the ABLS 322 and the NBLS 320. An entity in this context refers to a device, sensor, object, or daemon.

*Amendments to Existing Claims:*

11. (Amended) An architecture for an automation system, the automation system used to remotely control and monitor [a plurality of] power consuming devices drawing power from a power line in a building, the architecture comprising:

[at least one]a look-up service [to maintain at least one]maintaining a database of (1) the [plurality of] power consuming devices [by a plurality of device attributes] including their attributes of device type and physical location, and (2) [of a plurality of] device objects corresponding to the [plurality of]power consuming devices [by mapping] including a name for each device object mapped to at least one address[ for each device object];

a[ soft-state] store [to manage]managing [at least periodic refresh] information for [the plurality of devices and the plurality of device objects, the refresh information managed by the soft-state store as a plurality of soft-state variables] refreshing the power consuming devices and the device objects;

a publication/subscription eventing component [to enable] enabling subscriptions to events related to changes in the [plurality of soft-state variables managed by the soft-state store] refresh information managed by the store; and,

a power line [monitoring daemon to detect] monitor detecting super-imposed transmissions from the power consuming devices on the power line, which signal problems with the [plurality of] power consuming devices [that are power line devices].

12. (Amended) The architecture of claim 11, wherein the power line [monitoring daemon] monitor uses pattern-based detection for detecting unacceptable power line activity.

13. (Amended) The architecture of claim 12, wherein the power line [monitoring daemon] monitor matches power line patterns against unacceptable power line patterns stored in a pattern database.

14. (Amended) The architecture of claim 11, wherein the power line [monitoring daemon] monitor uses model-based detection for detecting acceptable power line activity.

15. (Amended) The architecture of claim 14, wherein the power line [monitoring daemon] monitor tests power line patterns against a pattern model of acceptable power line patterns.